

ABSTRACT

A single-axial precision measuring apparatus includes a base, a flatbed at the base, a flattening mechanism and a monitor above the flatbed, and a distance measuring mechanism below the flatbed. The characteristics of the invention are that, the flatbed is a transparent plate having a plurality of ventilation openings that are connected with a suction tube of a vacuum suction device; the flattening mechanism is capable of up-and-down displacements, and has multi-sectional halt heights through program controls; and the distance measuring mechanism disposed below the flatbed is capable of transverse movements, and at least has an optical ruler, a laser positioning element and CCD cameras. Wherein, the CCD cameras focus at the measuring points, and transmit images captured to the monitor.